ANNUAL REPORT OF THE CENTRAL METEOROLOGICAL OBSERVATORY OF JAPAN

FOR

THE YEAR 1903.

PART II.

ON

THE BAROMETRIC DEPRESSIONS

IN

THE YEAR 1903.

PUBLISHED BY THE CENTRAL METEOROLOGICAL OBSERVATORY,

TOKIO.

1917.

BAROMETRIC DEPRESSION IN THE YEAR 1903.

JANUARY.

1. *1st.* — Typhoon of the Pacific between the Riukiu and Bonin islands.
1. *5th.* — Continental cyclone from Northern Manchuria.
3. *8th.* — Continental cyclone from North China.
4. *14th.* — Typhoon from the Pacific to the east of Luzon.
5. *25th.* — Continental cyclone from the upper Yangtse-valley.

FEBRUARY.

1. *2nd.* — Typhoon of the Pacific between the Riukiu and Mariana islands.
2. *12th.* — Barometric depression from the Eastern sea of China.
3. *25th.* — Continental cyclone from China Proper.

MARCH.

1. *4th.* — Continental cyclone from the upper Yangtse-valley.
2. *12th.* — Continental cyclone from Mongolia.
3. *14th.* — Continental cyclone from the upper Yangtse-valley.
4. *18th.* — Typhoon from thc Pacific to the southeast of Formosa.
5. *23rd.* — Continental cyclone from the upper Yangtse-valley.
6. *28th.* — Continental cyclone from the upper Yangtse-valley.

APRIL.

1. *10th.* — Barometric depression from the sea to the southwest of Formosa.
2. *14th.* — Continental cyclone from the southern part of the Yellow sea.
3. *20th.* — Barometric depression from the sea to the southwest of Formosa.
4. *23rd.* — Barometric depression from the sea to the southwest of Formosa.
5. *25th.* — Typhoon from the Pacific to the east of Luzon.

MAY.

1. *3rd.* — Continental cyclone from the lower Yangtse-valley.
2. *3rd.* — Barometric depression from the Pacific to the southeast of Formosa.
3. *7th.* — Continental cyclone from South China.

4. *12th.* — Continental cyclone from Tibet.
5. *14th.* — Continental cyclone from Mongolia.
6. *17th.* — Continental cyclone from South China.
7. *20th.* — Continental cyclone which passed between Tsingtau and Shanghai.
8. *29th.* — Continental cyclone from the upper Yangtse-valley.

JUNE.

1. *16th.* — Continental cyclone from the south coast of China.
2. *19th.* — Continental cyclone from the neighbourhood of Hangchow, South China.
3. *22nd* — Barometric depression from the Eastern sea of China.
4. *27th* — Continental cyclone from South China.

JULY.

1. *June 29th* — Continentl cyclone from Foukien province.
2. *1st* — Secondary cyclone that developed in the eastern part of Shikoku, Southern Japan.
3. *3rd* — Continental cyclone from Foukien province.
4. *6th* — Barometric depression from the Eastern sea of China.
5. *8th* — Typhoon rom the Pacific to the east of Luzon.
6. *14th* — Continental cyclone from the upper Yangtse-valley.
7. *18th* — Continental cyclone from the lower Yangtse-valley.
8. *21st* — Continental cyclone from North China.
9. *28th* — Typhoon from the Pacific to the east of Luzon. This typhoon caused a severe rainstorm over the Riukiu islands and Northern Chosen (Korea). At Isigakijima, Riukiu islands, the barometer fell as low as 719.8mm* on the 30th, at 8.30pm.

AUGUST.

1. *5th* — Typhoon from the Pacific to the southeast of the Riukiu Islands. This typhoon crossed Formosa on the 6th and caused a severe rainstorm which resulted in a great damage. At Hôkoto (Pescadores) the barometer fell to 737.3mm on the 6th, at 5.20pm.
2. *11th.* — Typhoon from the Pacific to the northeast of Luzon.
3. *17th.* — Typhoon from the Pacific to the east of Luzon. This typhoon crossed Central Formosa on the 18th, and caused a heavy rain-

* The barometrie readings given in the text are all reduced to sea-level and to standard gnarity.

storm there. At Taito, SE. Formosa, the barometer fell to 738.1mm on the 18th, at 5pm.

4. *29th.*— Typhoon from the Pacific to the north of the Pelew islands. During the visitation of this typhoon a heavy rain fell over Southern Formosa.

SEPTEMBER.

1. *8th.* — Typhoon from the Pacific near Guam island.
2. *22nd.*— Typhoon from the neighbourhood of Yap island. This Typhoon crossed Japan Proper, landing at the neighbourhood of Hamamatsu on the Tokaidô coast on the morning of the 23rd, and caused a heavy rainstorm over Japan. At Hamamatsu the barometer fell as low as 726.8mm on the 23rd, at 11am.

OCTOBER.

1. *1st.* — Typhoon from the Pacific to the north of Yap.
2. *4th.* — Typhoon from the Pacific to the east of Luzon. This typhoon crossed Southern Formosa at the 8th, and caused a heavy rainstorm there. The lowest barometer observed during the visitation of the storm was 739.4mm at Tainan on the 8th, at 8am.
3. *8th.* — Typhoon from the Pacific east of the Riukiu islands.
4. 16*th.*— Continental cyclone from Eastern Mongolia.

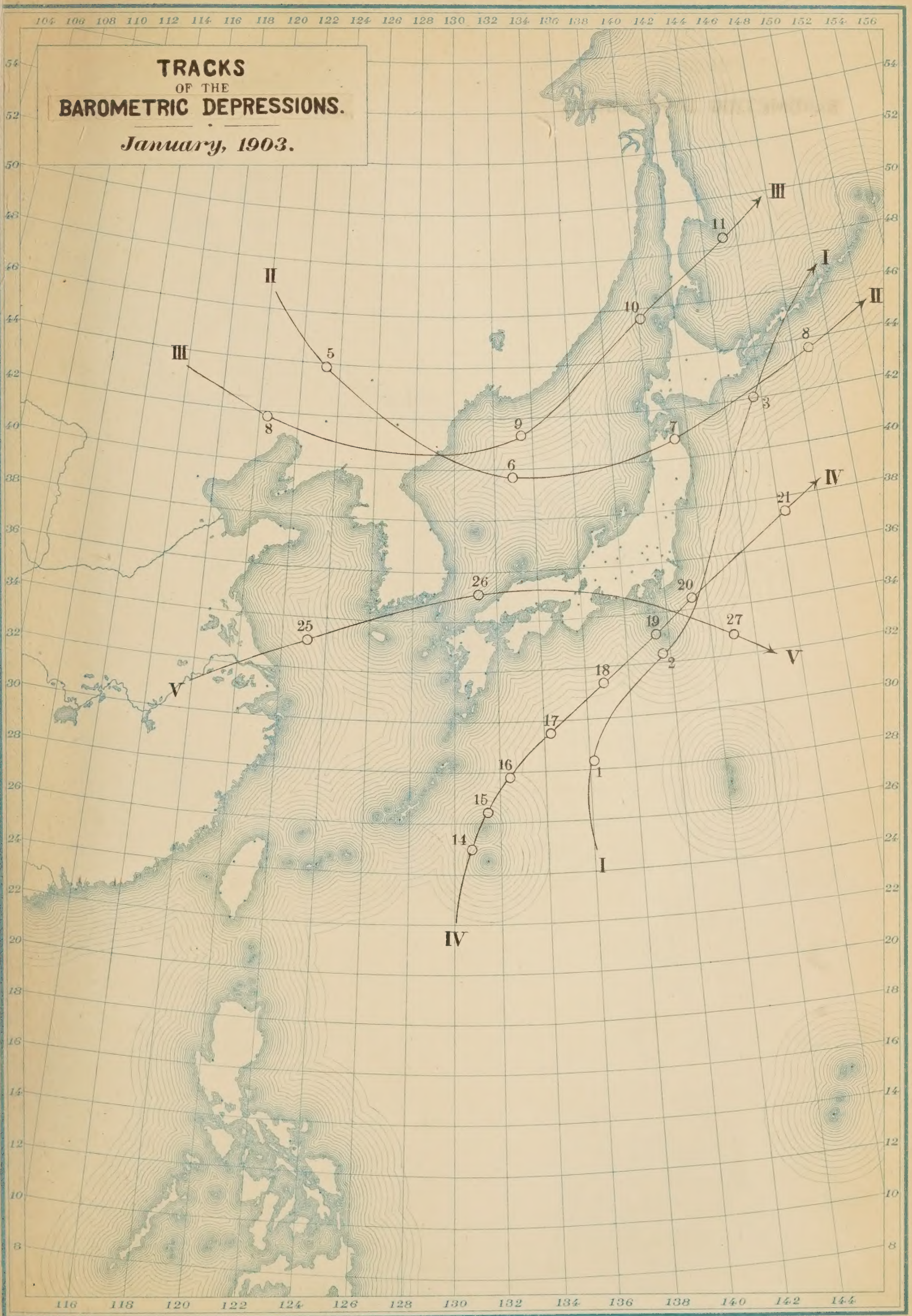
NOVEMBER.

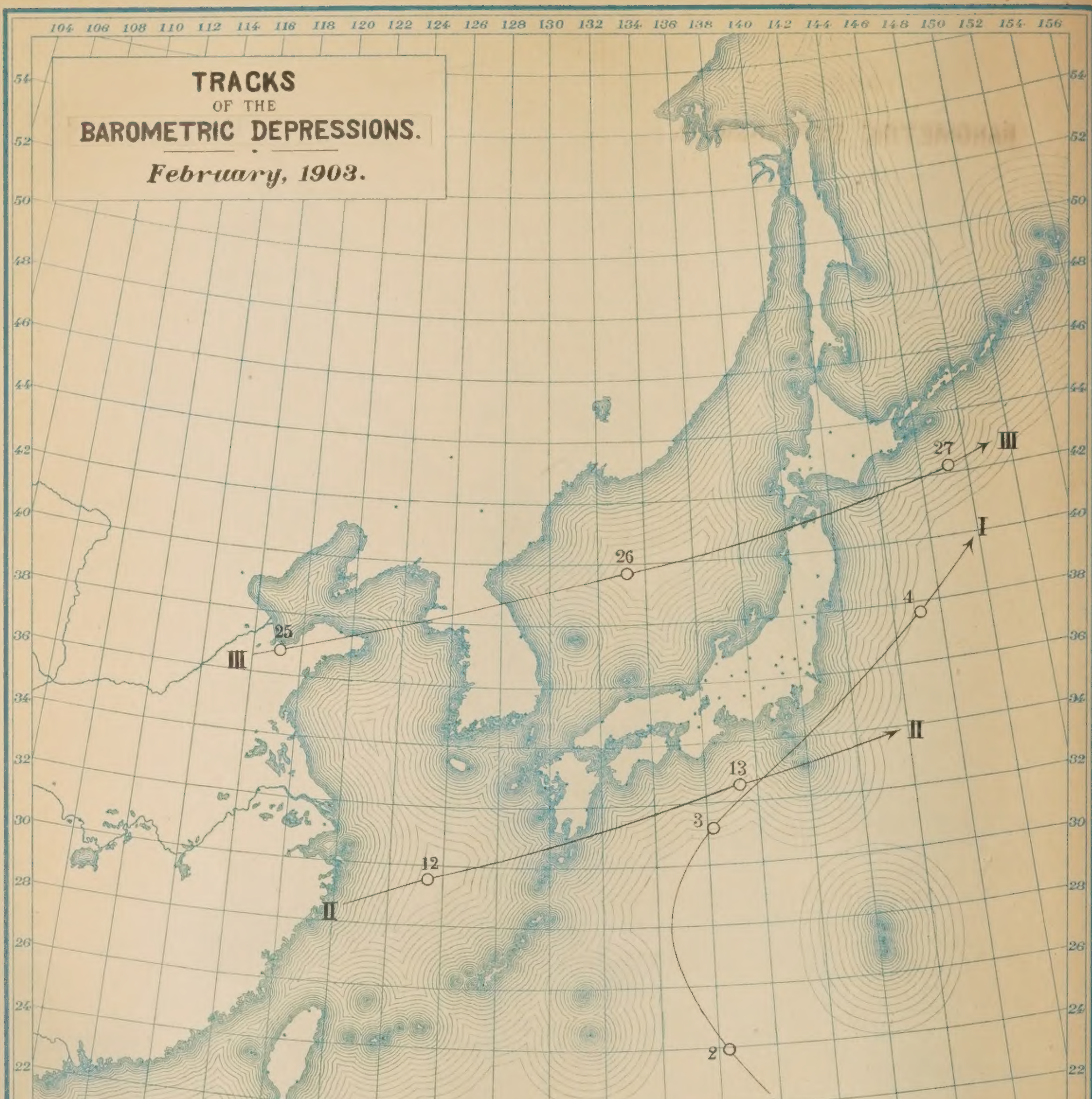
1. *5th.* — Barometric depression from the Pacific to the southeast of Formosa.
2. *17th.*— Continental cyclone from Tibet.
3. *27th.*— Barometric depression from the Pacific to the southeast of Formosa
4. *27th.*— Barometric depression from the southern part of the Japan sea. At Shana the barometer fell to 736.5mm on the 29th, at 5.30am.

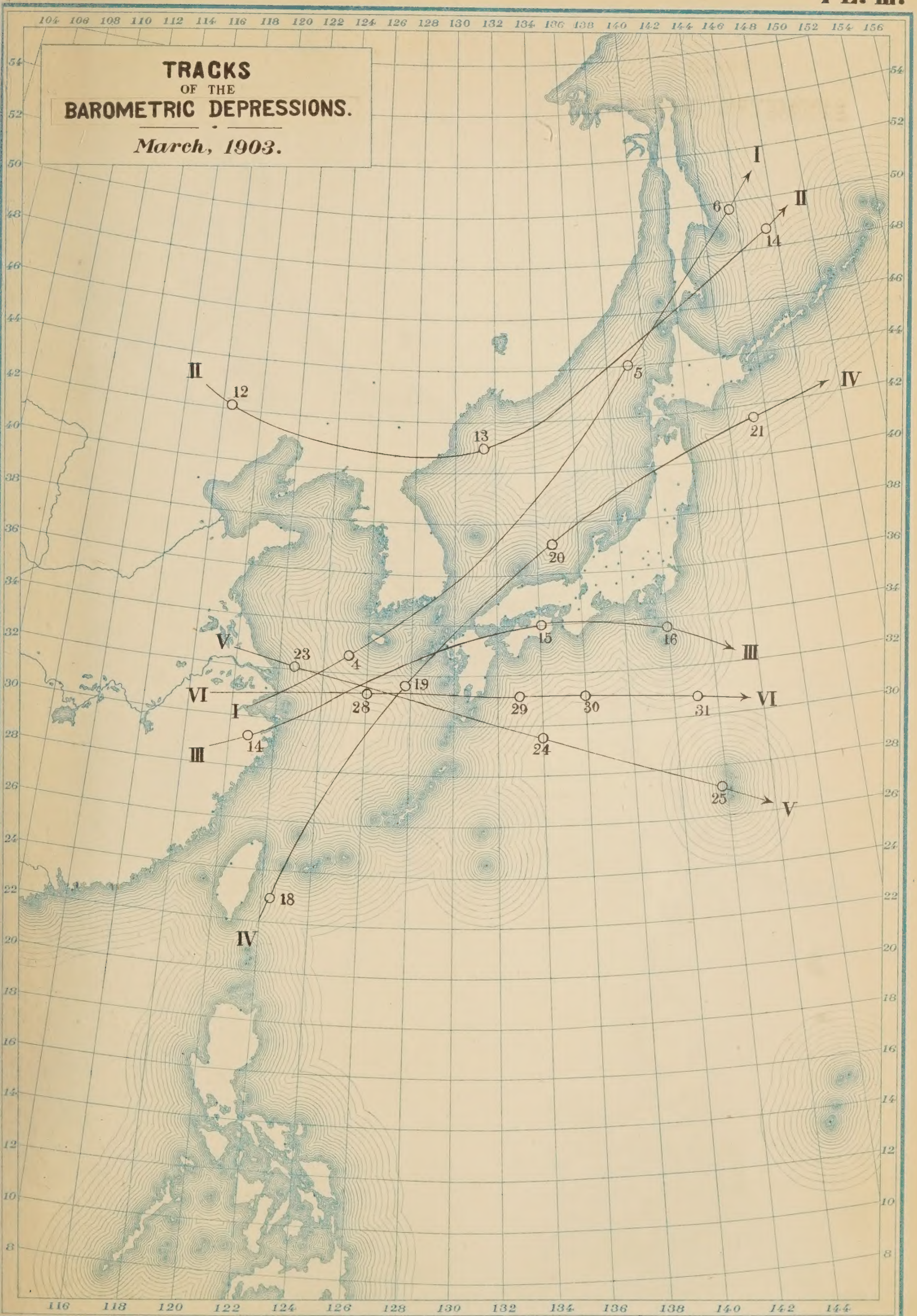
DECEMBER.

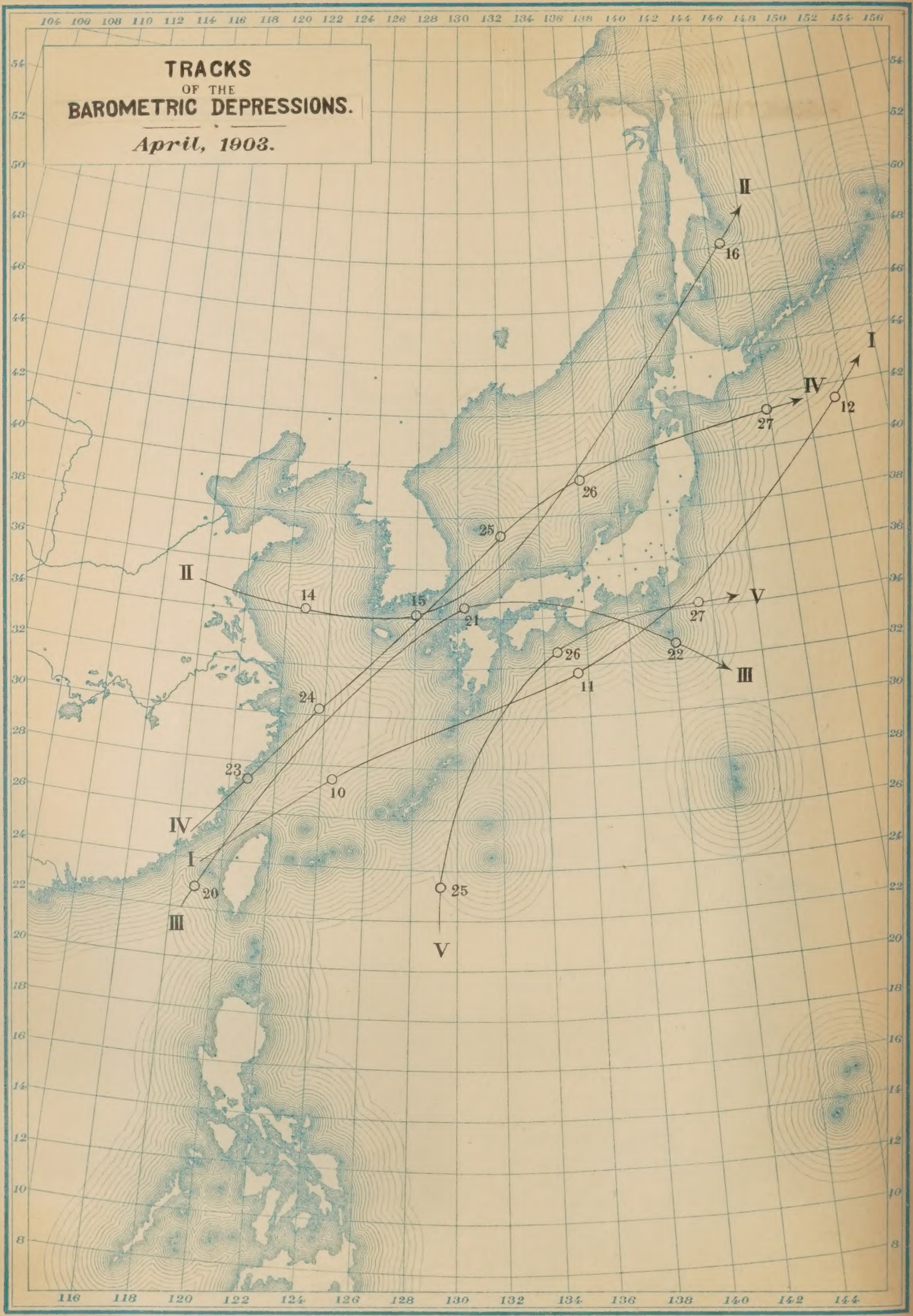
1. *7th.* — Continental cyclone from Eastern Mongolia.
2. *14th.*— Continental cyclone from the upper Yangtse-valley. This cyclone passed over the Japan sea and the Okhotsk sea. At Soya the glass fell to 736.mm on the 16th, at 8pm.
3. *27th.*— Typhoon from the Pacific to the southeast of the Riukiu islands.
4. *27th.*— Continental cyclone from Mongolia. During the visitation of this storm the glass fell to 735.0mm at Shana on the 30th, at 12pm.

Note.— The tracks of all the cyclonic storms given in the text are exhibited on the charts. Each of the small circles in the tracks indicates the position of the storm-centre at 6am on the date specified by the figures printed near the circle. The tracks of the typhoons and cyclones that caused heavy storms are given in thick lines.

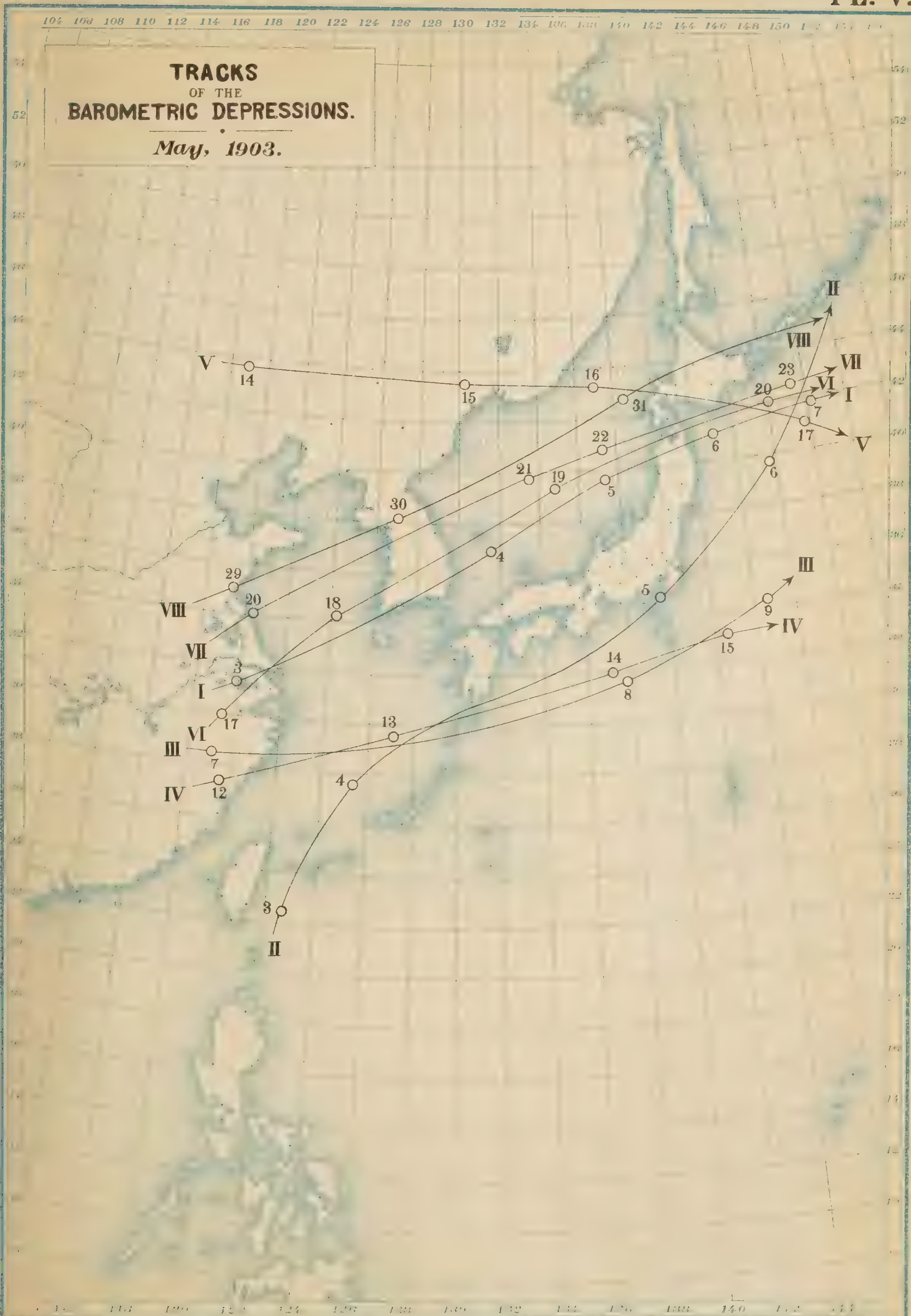

TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
January, 1903.
I
II
III
IV
V
1
2
3
5
6
7
8
9
10
11
14
15
16
17
18
19
20
21
25
26
27

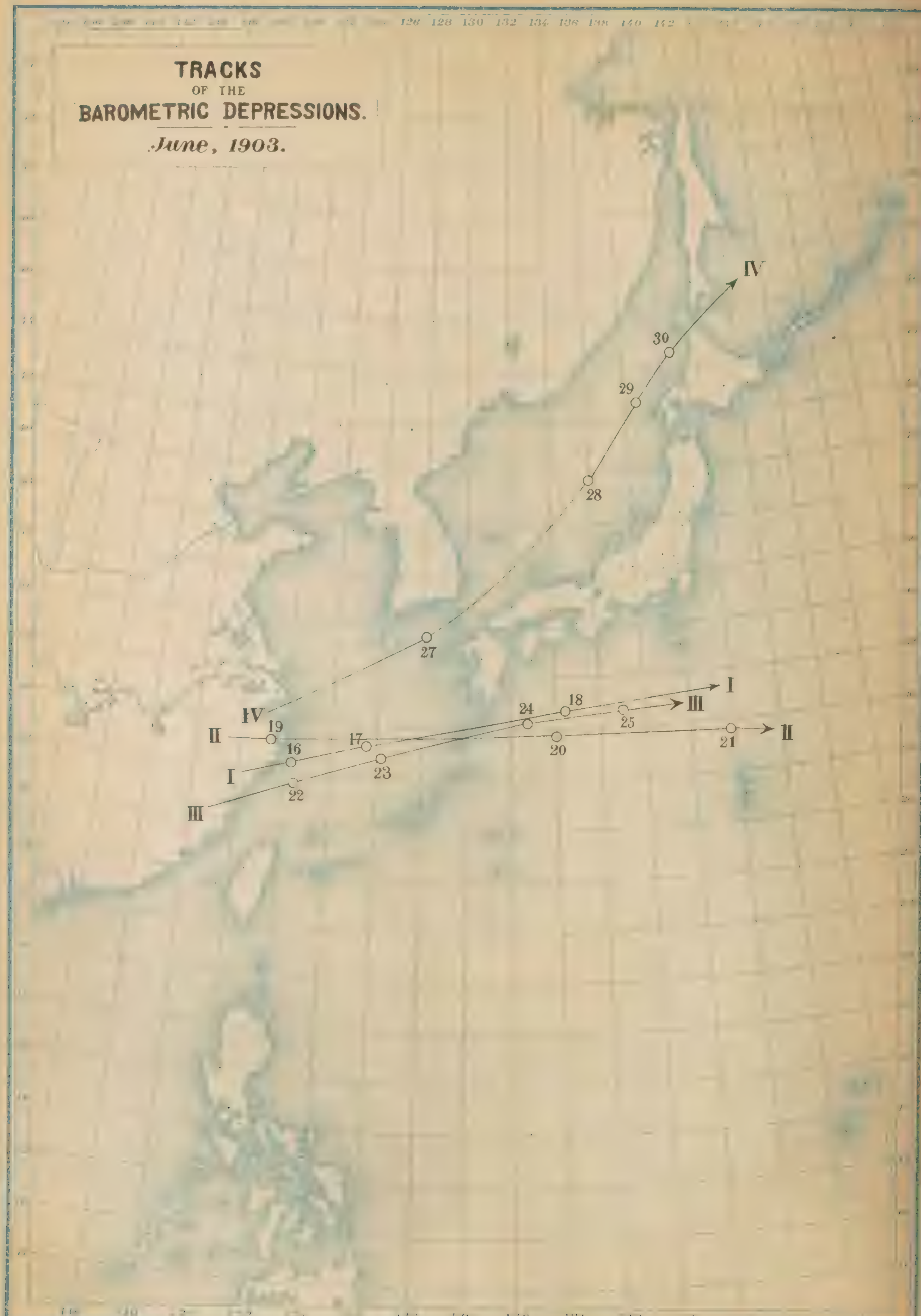

TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
February, 1903.
I
2
3
4
I
II
12
13
II
III
25
26
27
III


TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
March, 1903.
I
II
III
IV
V
VI
12
13
14
4
5
6
14
15
16
18
19
20
21
23
24
25
28
29
30
31

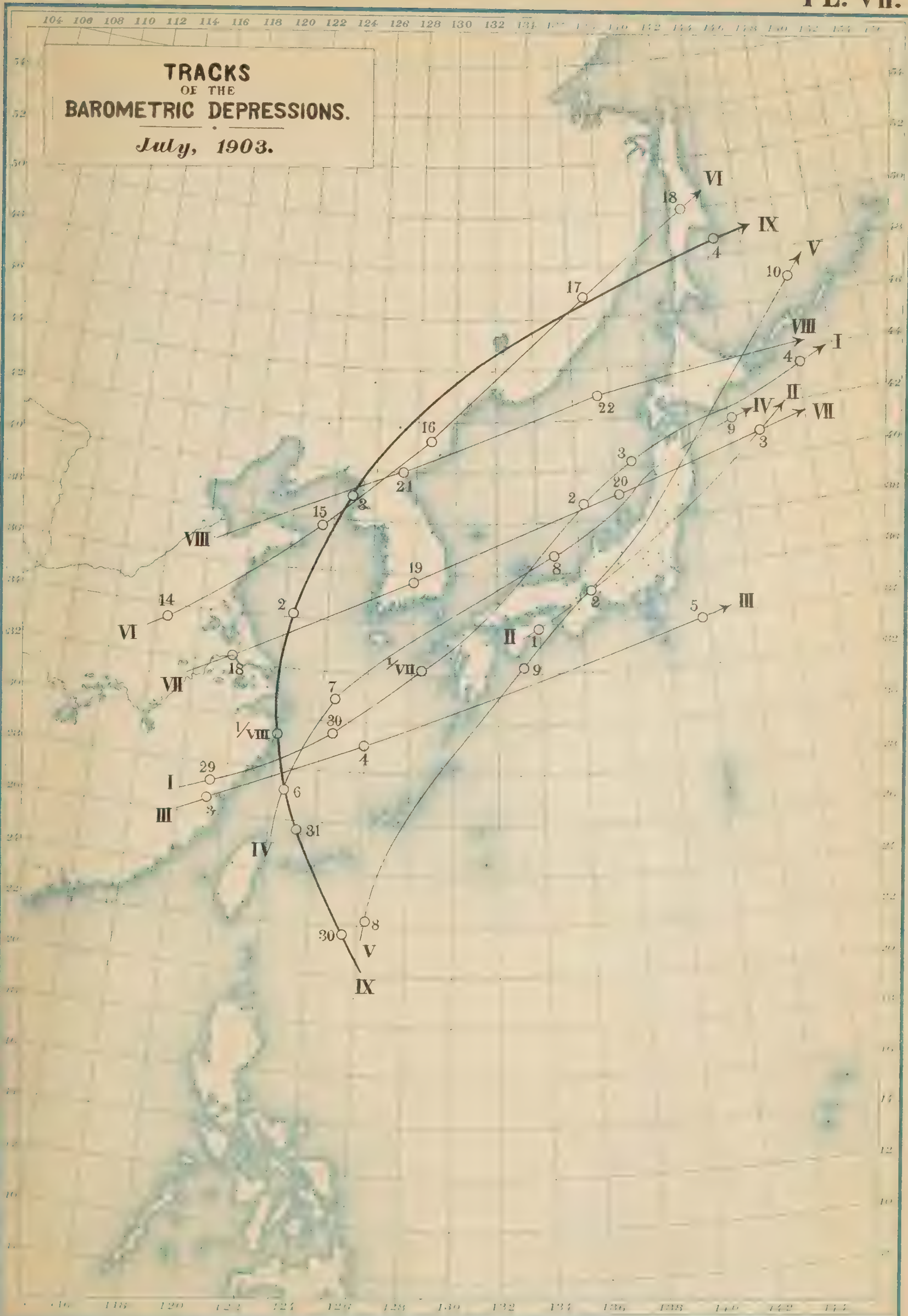

TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
April, 1903.
I
II
III
IV
V
10
11
12
14
15
16
20
21
22
23
24
25
26
27

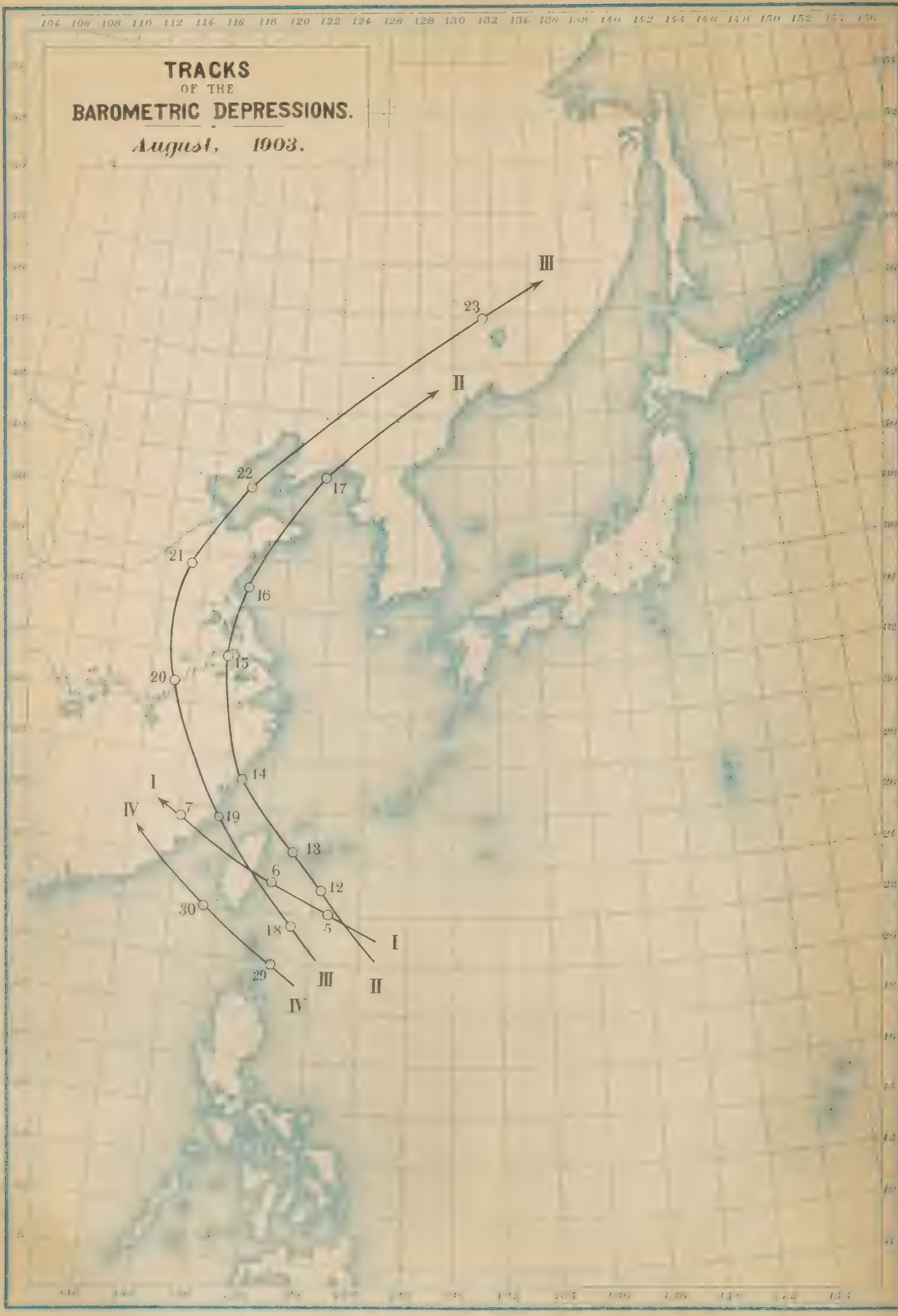
PL. V.

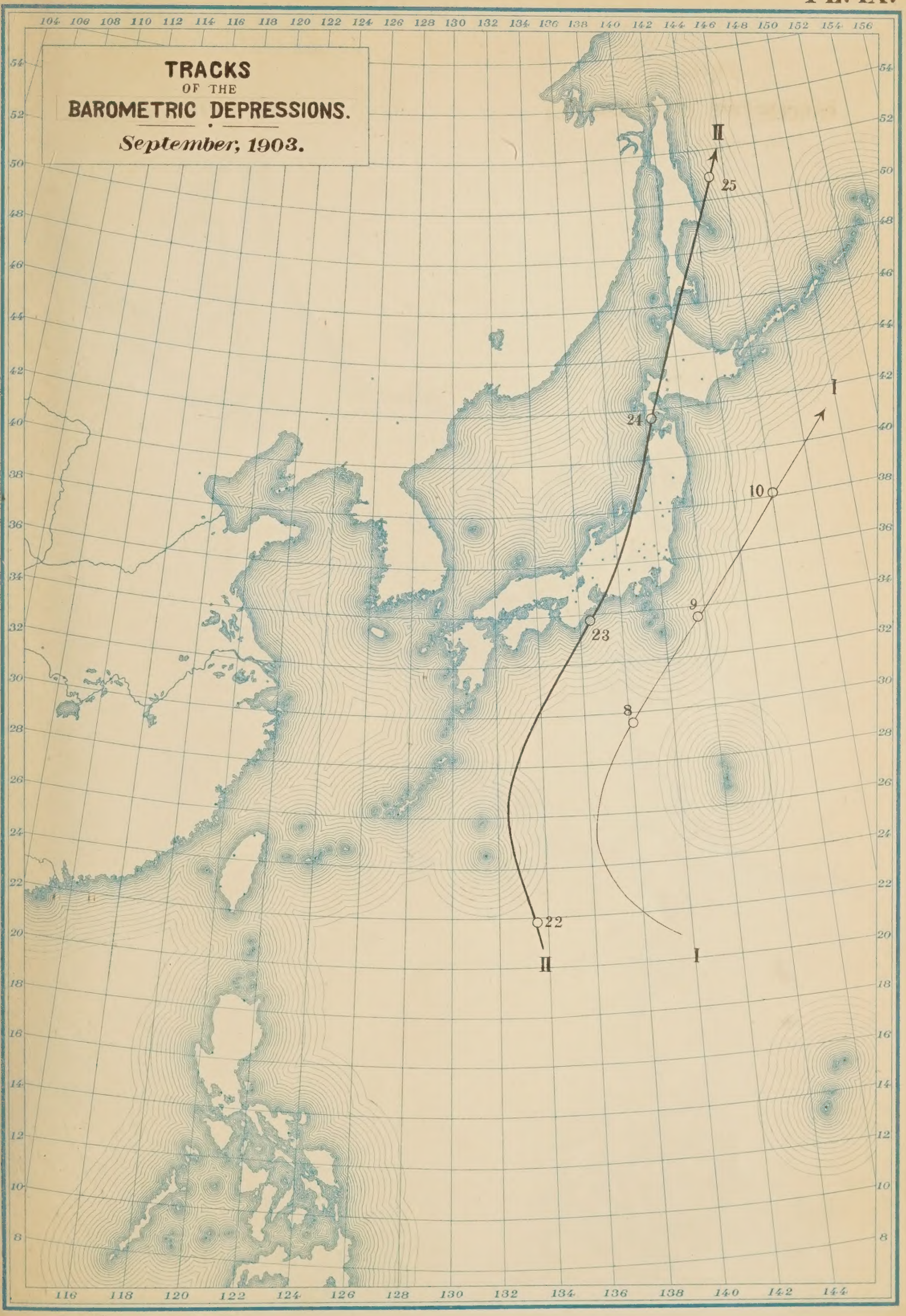

TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
May, 1903.
104 106 108 110 112 114 116 118 120 122 124 126 128 130 132 134 136 138 140 142 144 146 148 150
I
II
III
IV
V
VI
VII
VIII

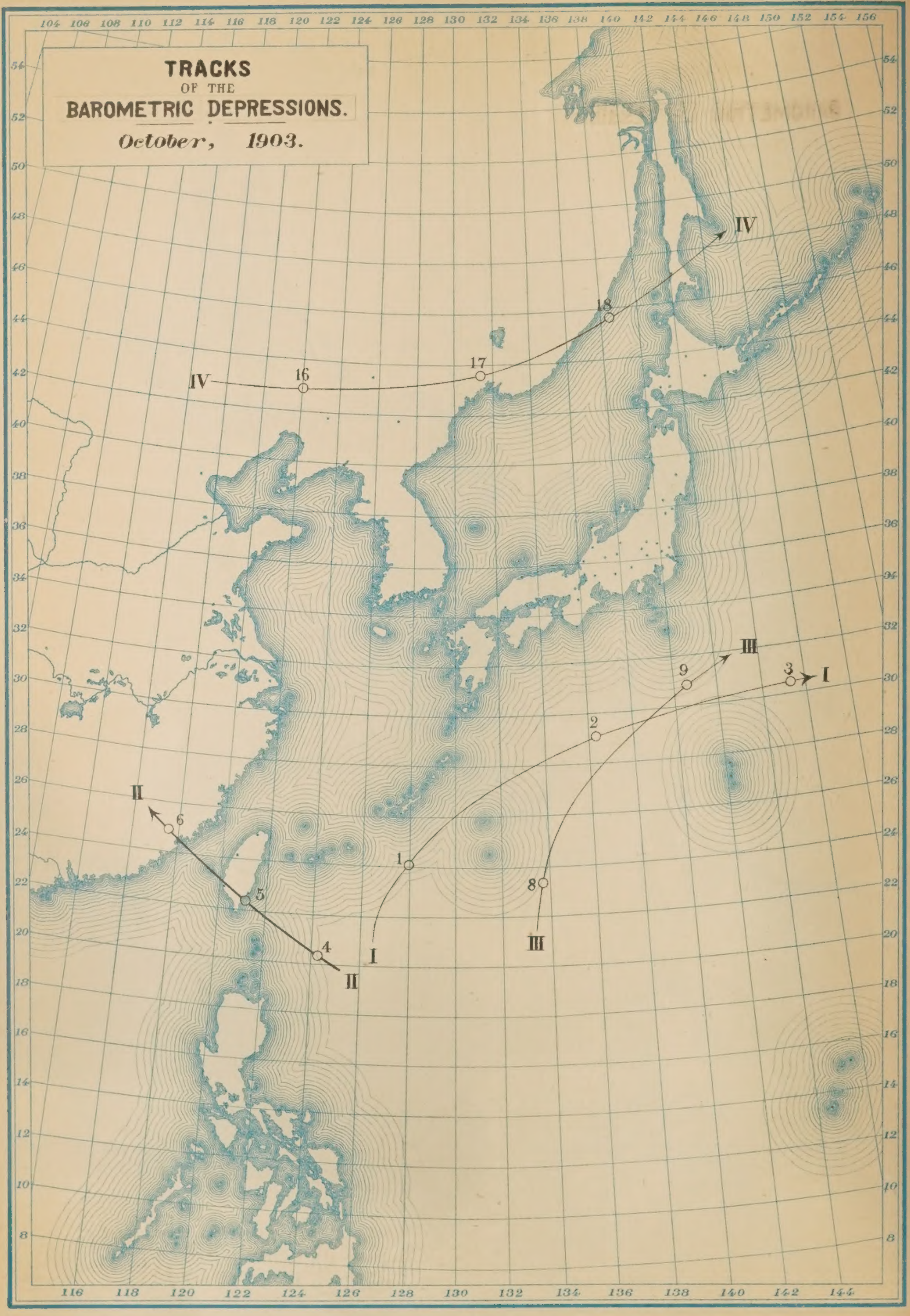

TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
June, 1903.
126
128
130
132
134
136
138
140
142
IV
30
29
28
27
IV
I
III
II
II
19
17
24
18
25
20
21
16
I
23
22
III

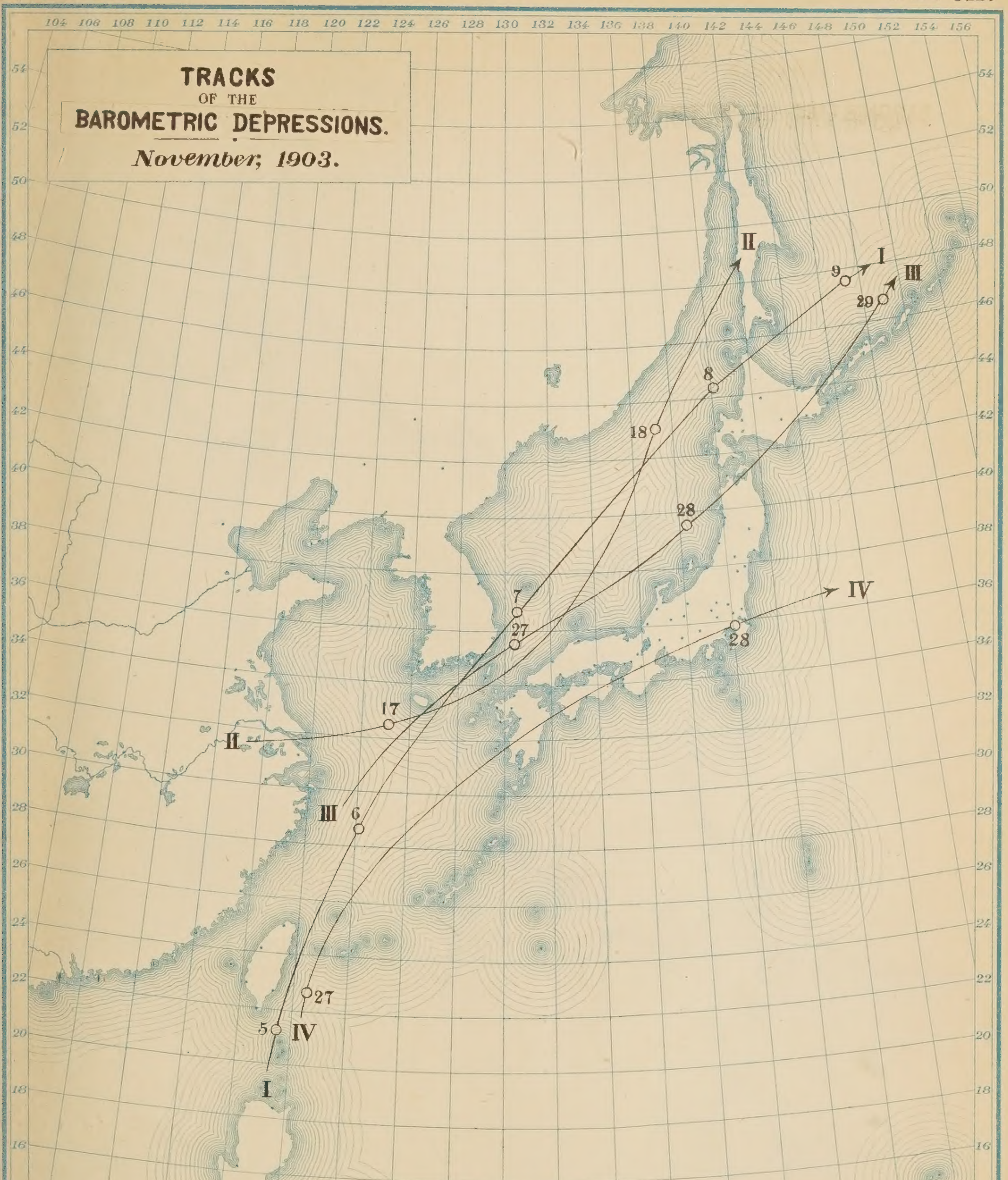
PL. VII.



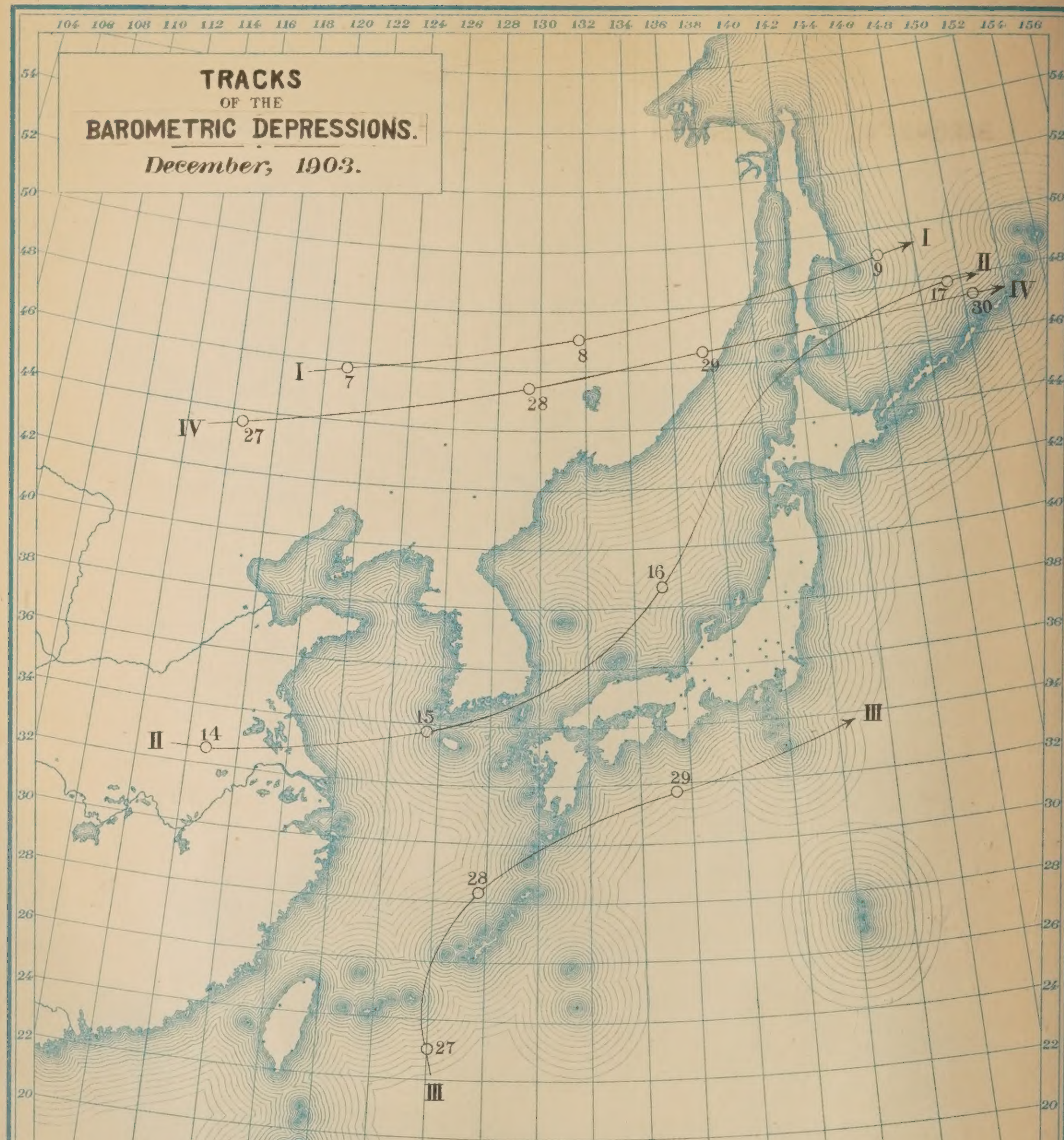

TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
August, 1903.
I
II
III
IV
5
6
7
12
13
14
15
16
17
18
19
20
21
22
23
29
30


TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
September, 1903.
I
II
8
9
10
22
23
24
25


TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
October, 1903.
I
1
2
3
II
4
5
6
III
8
9
IV
16
17
18


TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
November, 1903.
I
II
III
IV
5
6
7
8
9
17
18
27
28
29

PL. XII.


TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
December, 1903.
I
7
8
9
II
14
15
16
17
III
27
28
29
IV
27
28
29
30